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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech II Year I Semester Supplementary Examinations December-2021

C AND DATA STRUCTURES

(Common to CSE & CSIT)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

- 1 a Write a program to find sum of individual digits of a given number. L3 6M
 b Explain else-if ladder with the help of flowchart and program. L5 6M

OR

- 2 a List out unconditional control statements. Explain the difference among them. L2 8M
 b Explain the general form of a C program with an example. L5 4M

UNIT-II

- 3 a Distinguish between call by value and call by reference with examples. L4 6M
 b Write a C program using function to exchange two numbers using pointers. L3 6M

OR

- 4 a What is an array? What are the advantages of arrays over a ordinary variables? How arrays are declared and initialized? L2 6M
 b Write a program for finding the largest number in an array. L3 6M

UNIT-III

- 5 a Define union and give the general syntax for union. Write suitable example program. L6 6M
 b Write a C program to read and display multiple strings using pointers. L3 6M

OR

- 6 a Explain pointers and arrays with some example programs. L2 6M
 b Illustrate the use of typedef with suitable example. L3 6M

UNIT-IV

- 7 State any two applications of stacks and queues? With an example, explain infix, Postfix and prefix notation. L6 12M

OR

- 8 a What is data structure? Explain the linear and non linear data structure in detail. L1 6M
 b What do you mean by stack overflow and stack underflow L2 6M

UNIT-V

- 9 a Sort the following numbers using merge sort : 45,34,12,46,27,56,11,87,6,33,28. L4 6M
 b Explain insertion sort with an example. L2 6M

OR

- 10 What do you mean by Searching? Explain sequential search and binary search with suitable example. L5 12M

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